REMARKS

I. Interview

Applicants wish to express their appreciation for the courtesy shown to applicants' representative in the telephone interview with the Examiner on February 9, 2006.

II. Request to withdraw finality

Applicant has requested reconsideration of the refusal to withdraw finality of the office action dated August 19, 2005. Based on the recent interview with Examiner Lopez, it is understood that this request will be granted and the finality withdrawn, the amendment filed December 19, 2005 will be entered, as will the present amendment.

III. In re Harza and the present amendment

The Examiner's rejection of the claims herein is based on the prior art methods of crucible production in which a single electrode provides the heating for the crucible interior, with reference to In re Harza, 274 F.2d 669; 47 C.C.P.A. 771; 124 U.S.P.Q. 378 (C.C.P.A. 1960) for a general principle that "mere duplication of parts" is not patentable.

In re Harza, however, also stands for another principle – that a duplication of parts *plus* a new relationship between the parts is patentable. As a consequence, while the court in In re Harza rejected a claim that recited merely two ribs in a seal, the court at the same time allowed claims that added a recitation of "each rib being substantially as high as the spacing between adjacent ribs" and claims with the recitation of "the ribs on said opposite faces being laterally spaced in offset relation". In re Harza, 274 F.2d at 671.

The independent claims herein all recite structural parameters that go beyond "mere duplication" and recite new relationships between the electrodes used.

Claim 19 recites a method that includes a recitation that the electrode arrangements and respective heating zones thereof be spaced from each other in relation to a periphery of the quartz glass crucible, and that the electric arcs are created so as to reduce temperature differentials in the wall sections as the crucible is rotated relative to temperature differentials in a process employing a single electrode arrangement. The reduced temperature differentials is a relationship between the electrode arrangements that goes beyond "mere duplication" and provides a novel method that is superior to the prior art single-electrode methods.

Claim 38, as amended, recites a process in which the heating zones of the electrode arrangements are spaced from each other in relation to a periphery of the quartz glass crucible, and the electrode arrangements being evenly distributed about the periphery of the quartz glass crucible. This even distribution of the electrode arrangements is similarly a recitation of a relationship between the electrode arrangements that also goes beyond "mere duplication", and also provides a novel method that is superior to the prior art single-electrode methods.

Claim 47, as amended, recites a method having a step of creating electric arcs using a plurality of electrode arrangements each heating a wall of the quartz glass crucible in a respective heating zone while the quartz glass crucible is rotated so as to heat the SiO_2 particulate material pressed against the wall by centrifugal force from the rotation so as to form a glass surface on said wall. The electrode arrangements are located evenly distributed rotatively about the periphery of the quartz glass crucible, and the electric arcs are created

such that points on the wall are heated at least twice per revolution so as to reduce temperature differences therein. This language also goes beyond "mere duplication" and recites a specified interrelationship of the parts that is not suggested by, and is not possible in, a single-electrode arrangement.

Should any questions arise, the Examiner is invited to telephone attorney for applicants at 212-490-3285.

Respectfully submitted,

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